

CLAIMS

1. A method of associating a computer terminal of a user with a communications device operable by the user within a computer system, the method comprising
 - 5 performing the following steps:
 - generating an identifier for a communications line end-point,
 - communicating the identifier to the communications device via the computer terminal;
 - initiating a communication with the communications line endpoint using said
 - 10 communications device; and
 - when a request for connection to the communications line end-point generated by the communications device is received by other apparatus within said computer system, recording an identifier for the communications device; and
 - 15 checking if said device identifier has already been associated with at least one other identifier for a communications line end-point previously communicated to the computer terminal, and in the event of a match, associating the communications device of the user with the computer terminal of the user.
2. A method as claimed in claim 1, wherein the communications device is a
 - 20 telephone terminal.
3. A method as claimed in claim 2, wherein the identifier for a communications line end-point comprises a sequence of numerical digits.
 - 25 4. A method as claimed in claim 3, wherein the sequence of numerical digits comprises a telephoneable number.
 5. A method as claimed in any previous claim, wherein the identifier is communicated to the communications device via the computer communicating the identifier for the communications line end-point to the user.
 - 30 6. A method as claimed in 5, wherein the computer communicates the identifier by displaying it to the user.
 - 35 7. A method as claimed in claim 5 or 6, wherein the computer communicates the

identifier by audibly announcing it to the user.

8. A method as claimed in any previous claims, wherein the identifier for the communications line end-point is automatically communicated to the communications device.

9. A method as claimed in 8, when dependent on either claim 5 or 6, wherein an icon is displayed to the user by the computer, and by activating the icon the computer automatically communicates the identifier for the communications line end-point to the communications device.

10. A method as claimed in claim 8, wherein the identifier is automatically communicated using a wireless communications link between the computer and the communications device.

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11. A method as claimed in claim 8 or 9, wherein the communications link is short-range.

12. A method as claimed in any previous claim , further comprising in the event no match is obtained, iterating the steps of the method recited in claim 1 at least once.

13. A method as claimed in claim 2, wherein in at least the second iteration of the method steps, the identifier for the communications line end-point is communicated to the computer terminal only in response to a previous identifier for the communications device identity being associated with the computer terminal.

14. A method as claimed in any preceding claim, wherein the other apparatus comprises a communications switching system.

30 15. A method as claimed in claim 14, wherein the communications switching system comprises a PABX.

16. A method as claimed in any preceding claim, wherein the computer terminal is arranged to prompt the user to perform at least one additional action when requesting 35 connection to the communications line end-point.

17. A method as claimed in claim 16, wherein an additional action performed by the user is to cause the communications device to revert to an on-hook status at a predetermined time.

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18. A method as claimed in any one of claims 16 to 17, wherein an additional action performed by the user is to cause the communications device to go off-hook at a predetermined time.

10 19. A method as claimed in claim 6, wherein an additional action to be performed by the user is to enter information on the computer terminal indicative of a signal audible by the user over the communications line used to request connection to the identifier for the communications end-point.

15 20. A method of associating a computer terminal with a telephone terminal in a distributed computer system via a communications network, the computer terminal being associated with a unique computer identity and the telephone terminal being associated with a unique telephone terminal identity, the method comprising:-

- providing a user a telephonable number associated with a communication switching system;
- requesting connection to the number using the telephone terminal;
- detecting at the communications switching system, if a connection request to the number has been received; and if so,
- determining the telephone terminal identity of the telephone terminal from which the connection request generated and providing information indicating the telephone terminal identity and the number to which connection was requested to a host computer;
- processing the received information to determine if the telephone terminal identity is already associated with another telephone terminal identity, and
- 30 in the event that the telephone terminal identity is not already associated with at least one another number provided by the host computer to the computer terminal, generating a subsequent different telephonable number associated with the communications switching system, and repeating said requesting, determining, and processing steps; and
- 35 in the event the telephone terminal identity is already associated with at least

one other number provided by the host computer to the computer terminal, determining if the telephone terminal identity satisfies at least one association criterion for associating the telephone terminal identity which has requested connection with the computer terminal identity to which at least one other telephonable number was

5 provided, and in the event of the said at least one association criterion been met: registering the received identity of the telephone terminal in association with the identity of that computer terminal.

21. A method as claimed in claim 20, wherein the telephonable number to which
10 the telephone terminal first requested connection is displayed by said computer terminal.

22. A method as claimed in claim 21, wherein the telephonable number to which the telephone terminal first requested connection is provided by the host computer to
15 the computer terminal.

23. A method as claimed in any one of claims 20 to 22, in which at least one telephonable number is generated randomly by said host computer and associated with said communications switching system.

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24. A method as claimed in any one of claims 20 to 23, wherein the communications switching system detects if connection has been requested to one of said telephonable numbers by detecting if a make call command has been invoked by the telephone terminal.

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25. A system arranged to associate a computer terminal with a telephone terminal in a distributed computer system via a communications network, the computer terminal being associated with a unique computer identity and the telephone terminal being associated with a unique telephone terminal identity, the system comprising:-

30 means for providing a user a telephonable number associated with a communications switching system;
means for requesting connection to the number using the telephone terminal;
means for detecting at the communications switching system, if a connection request to the number has been received;
35 means for determining the telephone terminal identity of the telephone terminal

from which the connection request generated and providing information indicating the telephone terminal identity and the number to which connection was requested to a host computer, in the event a connection request has been received;

- means for processing the received information to determine if the telephone
- 5 terminal identity is already associated with another telephone terminal identity, and
 - means for generating, in the event that the telephone terminal identity is not already associated with at least one another number provided by the host computer to the computer terminal, a subsequent different telephonable number associated with the communications switching system to be provided to said user; and
- 10 means for determining, in the event the telephone terminal identity is already associated with at least one other number provided by the host computer to the computer terminal, if the telephone terminal identity satisfies at least one association criterion for associating the telephone terminal identity which has requested connection with the computer terminal identity to which at least one other telephonable number
- 15 was provided, and
 - means for registering, in the event of the said at least one association criterion been met, the received identity of the telephone terminal in association with the identity of that computer terminal.

20 26. A system as claimed in claim 25, wherein the telephonable number to which the telephone terminal first requested connection is displayed by said computer terminal.

27. A system as claimed in claim 26, wherein the telephonable number to which the telephone terminal first requested connection is provided by the host computer to the

25 computer terminal.

28. A system as claimed in any of claims 25 to 27, in which at least one telephonable number is generated randomly by said host computer and associated with said communications switching system.

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29. A system as claimed in any of claims 25 to 28, wherein the communications switching system detects if connection has been requested to one of said telephonable numbers by detecting if a make call command has been invoked by the telephone terminal.

30. A system as claimed in claim 25, wherein the means for providing, the means for generating, the means determining if the telephone terminal identity satisfies a least one association criterion, the means for processing, and the means for registering collectively constitute a subsystem.

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31. A system as claimed in claim 25, wherein the means to detect if a connection request has been received, the means for determining the identity of the telephone terminal requesting the connection constitutes a separate subsystem.

10 32. A system as claimed in any one of claims 25 to 31, wherein a port on the communications switching system is associated with a telephonable number, and for each telephonable number the associated port is activated only for a predetermined amount of time determined by said host computer.

15 33. A system as claimed in claim 32, wherein a port of the communications switching system is deactivated after a connection request to the port has been received.

20 34. A system as claimed in claim 33, wherein only one port associated with a telephonable number is activated at a time.

35. A system as claimed in claim 33 or 34, wherein the provision of a telephonable number to the computer terminal is associated with the on-set of the predetermined amount of time the port is activated for.

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36. A system as claimed in any one of claims 25 to 35, wherein the telephonable number is a random destination number assigned by the host computer.

37. A method of registering the identity of a telephone terminal in association with 30 the identity of a computer terminal, the method comprising the steps of:

providing to a user of the computer terminal, via that computer terminal, the identity of a predetermined destination terminal number;

detecting if a call has been requested to that predetermined destination terminal number;

35 receiving the identity of a telephone terminal from which that call was made;

storing at least one characteristic of the identity of the telephone terminal;
providing to the user, via that computer terminal, a second destination telephone number;
detecting if a call has been requested to the second destination terminal
5 number;
receiving the identity of a telephone terminal from which the second call was made;
storing at least one characteristic of the identity of the telephone terminal used to dial the second destination number;
10 comparing the received at least one characteristic of the telephone number used to dial the second destination number with the at least one characteristic of the telephone number used to dial the first destination telephone number; and
performing a comparison check to determine if a match exists between the two sets of at least one characteristics of the first and second telephone terminals to
15 register the received identity of the telephone terminal in association with the identity of that computer terminal.

38. A method as claimed in claim 37, wherein the step of providing the identity of a first predetermined destination terminal number is performed upon detection of a make
20 call command made via that computer terminal.

39. A system as claimed in any one of claims 25 to 36, wherein the communications switching system comprises a PABX.
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40. A computer terminal comprising components arranged to perform appropriate steps in the method of any one of claims 1 to 24.

41. Apparatus comprising components arranged to receive requests for connection
30 and to implement appropriate steps in the method according to any one of claims 1 to 24.

42. A computer system comprising:
a computer terminal according to claim 40; and
35 apparatus according to claim 41.

43. Computer software arranged in use to be installed on the computer terminal according to claim 30, the software arranged when loaded to enable the computer terminal to perform appropriate steps in the method of any of claims 1 to 24.

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44. Computer software arranged in use to be installed on apparatus according to claim 41, the software arranged when loaded to enable the computer terminal to perform appropriate steps in the method of any of claims 1 to 24.

10 45. A method of automatically associating a computer terminal of a user with a telephone terminal of the user within a computer system, the method comprising performing the following steps:

generating a telephonable number which is communicated to the computer terminal;

15 the computer terminal communicating the telephonable number to a telephone terminal using a communications link;

the telephone terminal automatically dialling the telephonable number; and

when a request for connection to the telephonable number is received by other apparatus within said computer system, recording a terminal identity of the telephone

20 terminal; and

checking if a previous record exists containing said telephone terminal identity in association with at least one other telephonable number communicated to the computer terminal, and in the event of a match, associating the telephone terminal of the user with the computer terminal of the user.

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46. A method as claimed in claim 45, wherein the wireless communications link is a short-range wireless communications link.

47. A method of associating a computer terminal of a user with a telephone terminal 30 of the user within a distributed computer system, the method comprising iteratively performing the following steps:

generating a telephonable number which is communicated to the user via the computer terminal;

dialling the telephonable number using the telephone terminal; and

35 when a request for connection to the telephonable number is received by other

apparatus within said distributed computer system, recording a terminal identity of the telephone terminal; and

5 checking if a previous record exists containing said telephone terminal identity in association with at least one other telephonable number communicated to the computer terminal, and in the event of a match, associating the telephone terminal of the user with the computer terminal of the user.

48. A method as claimed in claim 47, wherein in the second and subsequent iterations of the method steps, the telephonable number is communicated to the 10 computer terminal only in response to a previous telephone terminal identity being associated with the computer terminal.

49. A method as claimed in either claim 47 or 48, wherein the other apparatus comprises a communications switching system.

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50. A method as claimed in claim 49, wherein the communications switching system comprises a PABX.